

1/9

100

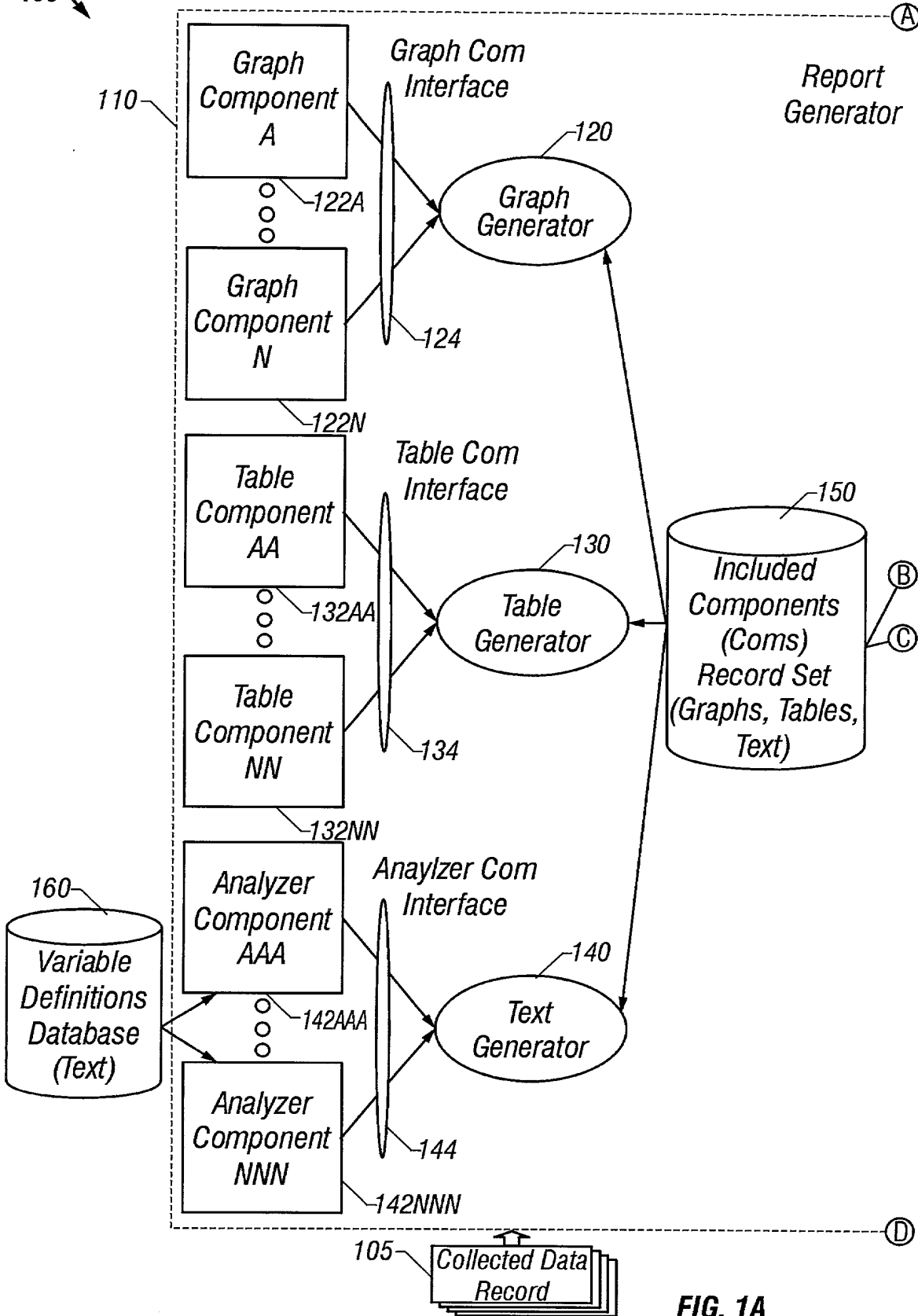


FIG. 1A

0945292.03101

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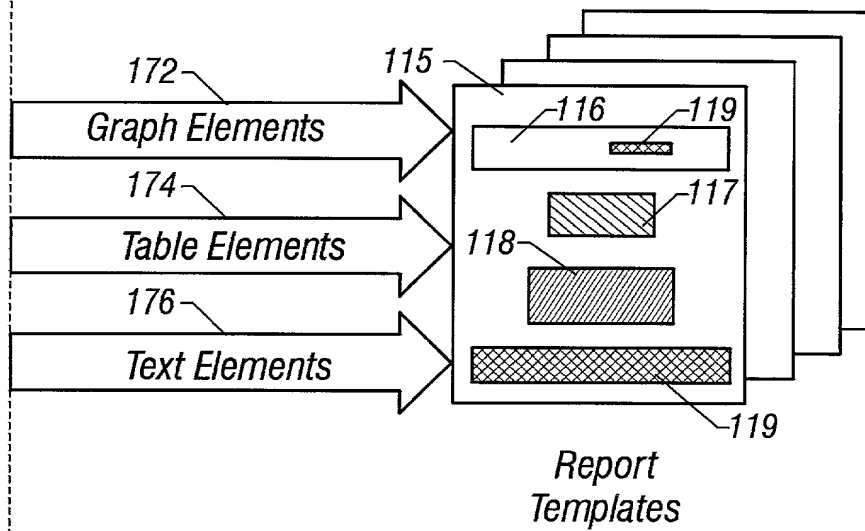
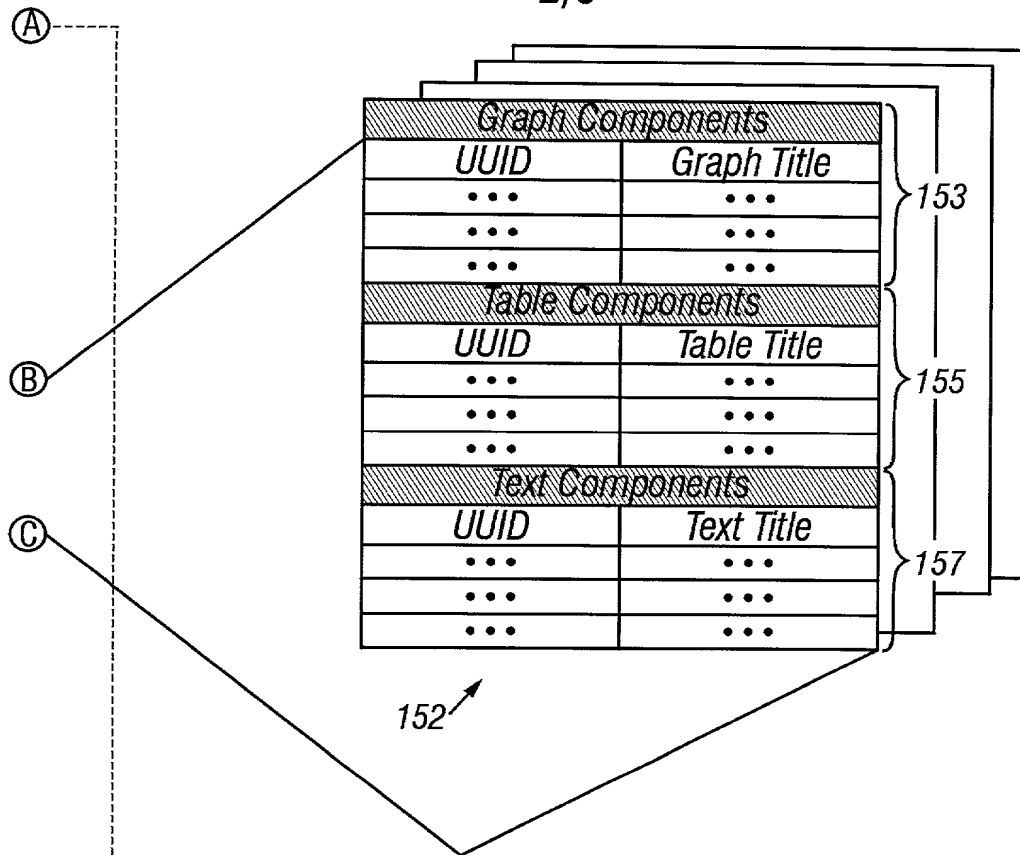


FIG. 1B



300  
↙

Xchange Record XYZ				
Graph Components				
320 { 322 {	UUID	Elements	324	
	1X5TBCJ8	XchGraph 4. Graph		
Table Components		334	344	
330 { 332 {	UUID			Title
	ZB4952LP			XchTable 9. Table
Analysis (Text) Components		344	342	
340 { 342 {	UUID			Title
	NY04TJ3R			XchMTA . Analyzer

FIG. 3

Variable	Output Text
411 {MTALoad_Q_Peak_No_Prob_Findings	No excessive peaks were detected in the MTA } <sup>412</sup> work queue.
413 {MTALoad_Q_Peak_No_Prob_Recommendations	No changes are recommended. } <sup>414</sup>
415 {MTALoad_Q_Peak_Prob_Findings	One or more significant peaks occurred in the MTA work queue. The likely source of these peaks is a communication problem between the MTA and another Exchange component on this server, a connector, or a remote Exchange MTA. } <sup>416</sup>
417 {MTALoad_Q_Peak_Prob_Recommendations	(1) Verify that all servers with large backlogged MTA queues bound for them are accessible over the network. (2) Verify that all Exchange services, including the MTA, are up and running on all servers in the organization. (3) Check the application event log in chapter 6 for additional information on specific errors. } <sup>418</sup>

FIG. 4

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## Message Transfer Agent

### Background

The message Transfer Agent (MTA) is responsible for managing messages that must be transferred to or from a non-local e-mail server. This includes other Exchange servers and non-Exchange e-mail servers (Lotus Notes, SMTP, cc:Mail, etc.). The MTA also manages distribution lists for messages.

MTA queue lengths provide a general indication of Exchange performance. In general, on a well configured Exchange server, the queues will be close to 0. On a system exceeding its capacities, the queue will approach 2. Should a queue length regularly exceed 2, the system will be perceptibly slow.

While high queue times may indicate a problem with Exchange, a backlog of messages on the MTA may actually be an indication of a problem elsewhere in the system. Typically, these other problems include connectivity problems with other servers, including the following:

- There may be network problems prohibiting data transfer.
- There may be network security issues (site connectors between two domains with different service accounts).
- Other Exchange systems may be shut down or their Exchange services may be stopped.

An additional factor that affects MTA performance is the amount of external mail being processed by the server. Because Exchange handles internal mail (mail sent to a recipient on the same server) more efficiently and faster than external mail, high levels of external mail increase the amount of MTA-dependent processes.

### Analysis

Our analysis of the Message Transfer Agent consisted of examining the lengths of **<Name Field>** MTA queues and the periods of peak MTA queue length.

### Selected Data

**Graph 1 - MTA Work Queue Length.** The **MTA Queue Length** is the one-hour average number of outstanding messages in the MTA queue that had not been processed to completion. The **High Queue Length** represents the highest value monitored during each hour. This counter provides an overall health rating for the MTA.

510C — **Message Transfer Agent Queue Length** — 530A  
<XCHGRAPH 4.Graph Field>

FIG. 5A

004522 03101

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510D { *The following table lists the eight time periods in Graph 1 with the highest MTA queue lengths. The times shown reflect the end of the hour in which a peak value occurred.*  
*One-hour Periods in which Peak MTA Queue Lengths Occurred*

<XCHGTABLE 9.Table Field> 540A

---

510E { *Findings and recommendations Regarding the Message Transfer Agent*  
*During the monitored period, <XCHMTA.ANALYZER\_1 Field>* 520A

510F { *Recommended actions are to <XCHMTA.ANALYZER\_2 Field>* 520B

**FIG. 5B**

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## Agent

### Background

The Message Transfer Agent (MTA) is responsible for managing messages that must be transferred to or from a non-local e-mail server.

This includes other Exchange servers and non-Exchange e-mail servers (Lotus Notes, SMTP, cc:Mail, etc.). The MTA also manages distribution lists for messages.

MTA queue lengths provide a general indication of Exchange performance. In general, on a well configured Exchange server, the queues will be close to 0. On a system exceeding its capacities, the queue will approach 2. Should a queue length regularly exceed 2, the system will be perceptibly slow.

While high queue times may indicate a problem with Exchange, a backlog of messages on the MTA may actually be an indication of a problem elsewhere in the system. Typically, these other problems include connectivity problems with other servers, including the following:

- There may be network problems prohibiting data transfer.
- There may be network security issues (site connectors between two domains with different service accounts).
- Other Exchange systems may be shut down or their Exchange services may be stopped.

An additional factor that affects MTA performance is the amount of external mail being processed by the server. Because Exchange handles internal mail (mail sent to a recipient on the same server) more efficiently and faster than external mail, high levels of external mail increase the amount of MTA-dependent processes.

### Analysis

Our analysis of the Message Transfer Agent consisted of examining the lengths of XBO104's MTA queues and the periods of peak MTA queue length.

620A

### Selected Data

**Graph 1 - MTA Work Queue Length.** The MTA Queue Length is the one-hour average number of outstanding messages in the MTA queue that had not been processed to completion. The **High Queue Length** represents the highest value monitored during each hour. This counter provides an overall health rating for the MTA.

610A

610B

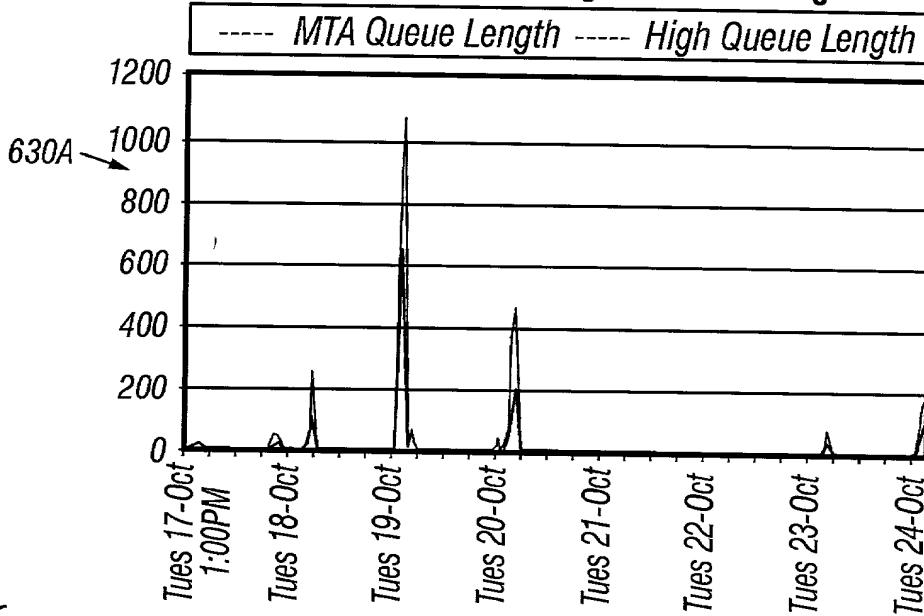
FIG. 6A

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# Message Transfer Agent Queue Length



610D { The following table lists the eight time periods in Graph 1 with the highest MTA queue lengths. The times shown reflect the end of the hour in which a peak value occurred.

## One-hour Periods in which Peak MTA Queue Lengths Occurred

DATE	END TIME OF ONE-HOUR PERIOD IN WHICH PEAK VALUE OCCURRED:	PEAK GRAPH LENGTH
10/13/00	6:00 PM	250.7
10/14/00	2:00 PM	820.5
10/14/00	3:00 PM	1066.9
10/15/00	3:00 PM	95.1
10/15/00	4:00 PM	401.9
10/15/00	5:00 PM	448.9
10/18/00	5:00 PM	72.3
10/19/00	3:00 PM	172.1

640A

## Findings and Recommendations regarding the Message Transfer Agent

610E { During the monitored period, one or more significant peaks occurred in the MTA work queue. The likely source of these peaks is a communication problem between the MTA and another Exchange component on this server, a connector, or a remote Exchange MTA.

620E

610F { Recommended actions are to (1) Verify that all servers with large backlogged MTA queues bound for them are accessible over the network. (2) Verify that all Exchange services, including the MTA, are up and running on all servers in the organization. (3) Check the application event log in chapter 6 for additional information on specific errors.

620B

FIG. 6B